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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO.       |
|--|-------------|----------------------|--------------------------|------------------------|
| 09/307,443   | 05/10/1999  | CHARLES R. RUELKE    | CM02872J (MOT03 P340)    | 4848                   |
| 277 7590 08/06/2007<br>PRICE HENEVELD COOPER DEWITT & LITTON, LLP<br>695 KENMOOR, S.E.<br>P O BOX 2567<br>GRAND RAPIDS, MI 49501 |             |                      | EXAMINER<br>LEE, BENNY T |                        |
|  |             |                      | ART UNIT<br>2817         | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>08/06/2007  | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 09/307,443             |  | RUELKE, CHARLES R.  |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Benny Lee              |  | 2817                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-8,10,11, 12-14, 25-27 is/are allowed.
- 6) ☒ Claim(s) 2,3, 9, 15-17,19-24, 28,29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 March 2007 has been entered.

The disclosure is objected to because of the following informalities: Page 2, line 9, note that parameter "V" needs to be strictly defined for clarity of description. Page 3, last line, note that "PCB" should be rewritten as --printed circuit board (PCB)-- for an appropriate characterization. Page 5, line 11, note that --the-- should precede "coupling" for grammatical clarity; line 29, note that "from rectifying diode" should be rephrased as --e.g. blocking dc from a rectifying diode-- for an appropriate characterization. Page 6, line 25, note that "the greater higher" should be rephrased for clarity. Page 7, lines 26-28, note that "length of the flange segments 405, 406, and 407 are ... of the interconnecting vias 409" should be rephrased as --lengths 405, 406 and 407 of the flange segments are .... 409 of the interconnecting vias-- for an appropriate characterization. Page 8, lines 18, 19, note that "distance between each via 509" should be rephrased as --distance 509 between each via-- for an appropriate characterization. Page 9, line 13, note that "the distance between vias 609" should be rephrased as --the distance 609 between vias-- for an appropriate characterization; line 32, note that "capacitor 805" and "resistor 806" does not appear consistent with the labeling in FIG. 8, where the resistor is labeled "805" and the capacitor is labeled "806". Clarification is needed. Appropriate correction is required.

The drawings are objected to because of the following: In FIG. 3, should element (301) be cross-hatched as shown? It should be noted that “transmission line 301”, being a conductor, should be appropriately cross-hatched as a conductor rather than as an insulator, as presently depicted in FIG. 3. Clarification is needed. Also, in FIG. 3, should an “X-Y plane” be depicted such as to be consistent with the description at page 7, line 9? Clarification is needed.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification needs a description with regard to the second and third substrates being “asymmetrically posited” relative to the first substrate, such as recited in claim 24.

Claims 2, 3; 15; 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

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art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 2, 3, 15, 29, the recitation that the couplers are “resonators” does not appear to find support in the original disclosure and thus have been treated as “new matter”.

However, if applicant does not believe the above cited limitations are “new matter”, then an appropriate explanation is required, including pointing out where in the original disclosure support for the cited limitation can be explicitly found.

Claims 2, 3, 9; 16, 17, 19-24; 28, 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2, 3, note that it is unclear how “at least one forward coupler” and “at least one reverse coupler” are respectively intended to be related to the coupler structure already recited in claim 1, from which these claims directly depend. Clarification is needed.

In claim 9, note that it is unclear if the recitation of the “helix” being a “reverse power coupler” can properly depend from claim 8, where the “helix” has already been defined as a “forward power coupler”. Clarification is needed.

In claims 16, 17, 20, note that it is unclear whether the limitations recited in these claims can properly depend from the embodiment of the invention recited in independent claim 12. Note that the subject matter recited in claim 12 appears to correspond to the embodiment of Fig. 5 (i.e. off-set vias of helix coupler). It should be further noted that the Fig. 5 embodiment does not include any features corresponding to “secondary structures” which are “embedded” in the “conducting structures”. Therefore, it appears that the secondary structures can not properly

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depend from the Fig. 5 embodiment as presented in independent claim 12, from which these claims depend.

In claims 28, 29, note that "the at least one transmission line" lacks strict antecedent basis in claim 25.

The following claims have been found objectionable for reasons set forth below:

In claim 1, lines 4,5,6,7, 9, note that --at least one-- should be inserted prior to "transmission line" for consistency in claim terminology.

In claim 12, next to last line, note that it is suggested that --, said predetermined distance being less than a predetermined distance of at least one other via from the transmission line-- should be inserted after "line" to properly characterize this aspect of the invention.

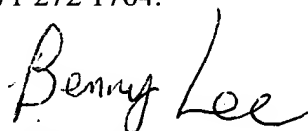
In claim 16, line 4, note that a --,-- should be inserted after "structures" for grammatical clarity.

Claims 2, 3; 9; 15-17, 19-24; 28, 29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 1; 4-8, 10, 11; 12-14; 25-27 are allowable over the prior art.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee

  
BENNY T. LEE  
PRIMARY EXAMINER  
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